

Impairment in Daily Function

Having asthma may impair one's ability to effectively work and sleep. Programs aimed at improving the quality of life of those with asthma should be targeted to those with obesity, depression, and a low education, and to those that smoke.

Employment Status: As shown in Figure 6, persons with asthma report being unable to work at three times the rate of people who do not have asthma.

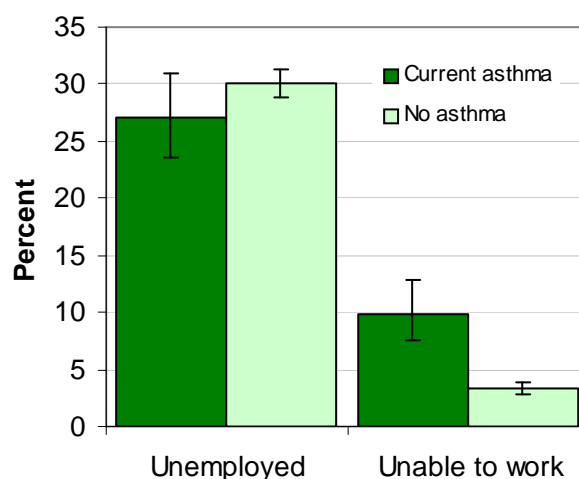
The models on the next page (Table 6) examine the relationship between certain variables and reporting impaired sleep or being unable to work. The adjusted model adjusts for gender, race, insurance status, household income, education level, smoking, obesity, and depression status, and race.

Unable to Work: 19.2% (95% CI: 15.6-23.3) of Vermonters with asthma reported one or more days in the past 12 months that they were unable to work or carry out usual activities due to their asthma (2005 BRFSS).

Being obese or depressed was associated with an increased risk of being unable to carry out work or daily activities due to asthma in the adjusted model.

Impaired Sleep: 50.0% (95% CI: 44.3-55.6) of Vermonters with asthma reported that their asthma symptoms made it difficult for them to stay asleep for one or more days in the past 30 days (2005 BRFSS). Being depressed and having a low education were associated with an increased risk of having impaired sleep due to asthma in the adjusted model.

Figure 5. Employment status by asthma status – Vermont adult residents, 2005.



DATA TABLES

Table 5. Employment status by asthma status – Vermont adult residents, 2005.

	Total population	Current asthma	No asthma
	% (95% CI)	% (95% CI)	% (95% CI)
Employed*	66.3 (65.1-67.6)	63.0 (58.7-67.1)	66.7 (65.4-68.0)
Unemployed**	29.8 (28.6-31.0)	27.1 (23.5-31.0)	30.1 (28.8-31.3)
Unable to work	3.9 (3.4-4.5)	9.9 (7.6-12.8)	3.3 (2.8-3.8)

* employed = employed for wages or self-employed, ** unemployed = out of work, student, homemaker, retired

Data source: BRFSS

Age-adjusted rates

Impairment in Daily Function

Table 6. Factors associated with impairment in sleep or unable to work due to asthma - Vermont adult residents with current asthma, 2004-2005 (combined).

	Impaired sleep		Unable to work	
	<u>Crude OR**</u>	<u>Adjusted OR</u>	<u>Crude OR</u>	<u>Adjusted OR</u>
Sex				
Male	0.64*	0.72	0.82	0.79
Female	1.0	1.0	1.0	1.0
Ages				
18-24	1.0	1.0	1.0	1.0
25-44	1.73	2.1	1.09	1.32
45-64	1.74	1.76	1.47	1.41
65+	1.94	2.29	1.49	1.77
Insurance				
Yes	0.74	0.85	0.8	0.68
No	1.0	1.0	1.0	1.0
Household income				
<125% FPL	1.5	1.38	1.46	1.46
125-249% FPL	2.07	2.45	1.22	1.22
250-349% FPL	1.45	1.65	1.6	1.6
350-499% FPL	1.15	1.48	0.9	0.9
500% FPL	1.0	1.0	1.0	1.0
Education				
Less than high school	1.72	4.51*	1.59	1.82
High school or G.E.D.	1.08	1.09	1.3	1.05
Some college or technical school	1.02	0.87	1.39	1.45
College degree or greater	1.0	1.0	1.0	1.0
Current smoker				
Yes	1.0	1.0	1.0	1.0
No	0.82	1.17	0.51*	0.54
Obese				
Yes	1.41*	1.24	1.7*	2.08*
No	1.0	1.0	1.0	1.0
Depression				
Yes	2.21*	2.19*	2.21*	2.09*
No	1.0	1.0	1.0	1.0
Race				
White/Non-hispanic	0.71	0.73	0.55	0.74
Blacks and Hispanics	1.0	1.0	1.0	1.0

* = significance at 0.05

Data Source: BRFSS

** Odds Ratio - see Technical Notes

2/12/2007

Page 11

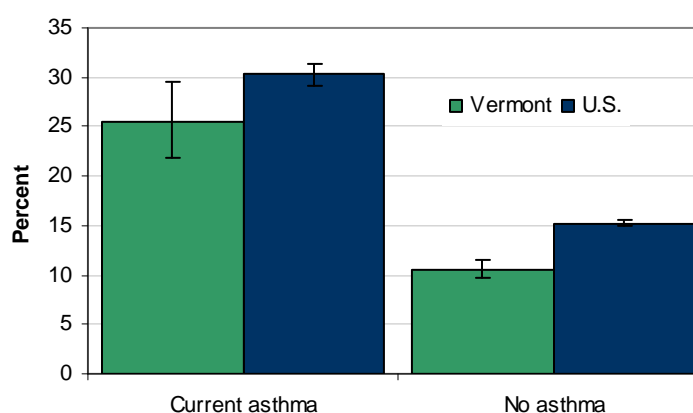
Quality of Life and Depression

Programs aimed at improving the quality of life of those with asthma should incorporate activities to promote both physical and mental health, as data show Vermonters with asthma are more likely to report being depressed or having a fair or poor quality of life.

Quality of Life: In Vermont, people with asthma report having a “fair” or “poor” quality of life at significantly higher rates than people without asthma (23.8% versus 9.9%).

Interestingly, overall rates of people reporting “fair” or “poor” quality of life are significantly lower in Vermont compared to the U.S.

Figure 6. Percent reporting “fair” or “poor” quality of life by asthma status – Vermont and U.S. adult residents, 2004.



Depression: People with asthma are significantly more likely to be depressed than those without asthma. Among Vermont adults in 2005:

- 18.2% (14.7-22.1) of people with asthma report having depression
- 9.6% (8.9-10.6) of people without asthma report having depression

DATA TABLES

Table 7. Percent reporting “fair” or “poor” quality of life by asthma status – Vermont and U.S. adult residents, 2004-2005.

	U.S.	Vermont	
	2004	2004	2005
	% (95% CI)	% (95% CI)	% (95% CI)
Current asthma	30.3 (29.2-31.4)	25.5 (21.9-29.5)	23.8 (20.5-27.6)
No asthma	15.2 (14.9-15.5)	10.6 (9.8-11.5)	9.9 (9.1-10.8)
Total population	16.4 (16.1-16.7)	11.8 (11.0-12.7)	11.2 (10.4-12.1)

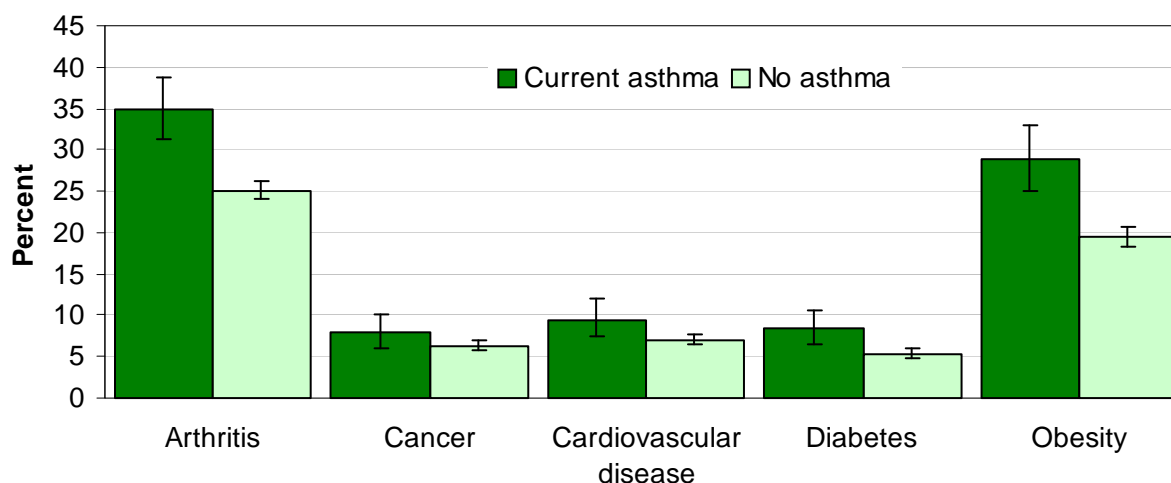
Data source: BRFSS
Age-adjusted rates

Co-morbidities

Given that people with asthma may be dealing with multiple chronic conditions, initiatives aimed at reducing chronic disease will benefit from working together.

Because many chronic diseases have similar risk factors, it is not surprising to find people with more than one chronic disease. Compared to Vermonters without asthma, Vermonters with asthma are significantly more likely to have arthritis, cardiovascular disease, diabetes, and obesity.

Figure 7. Asthma and chronic disease co-morbidities - Vermont adult residents, 2005.



DATA TABLES

Table 8. Asthma and chronic disease co-morbidities - Vermont adult residents, 2005.

	Total population	Current asthma	No asthma
	% (95% CI)	% (95% CI)	% (95% CI)
Arthritis	26.0 (25.0-27.1)	35.0 (31.4-38.8)	25.1 (24.0-26.2)
Cancer	6.5 (5.9-7.0)	7.9 (6.1-10.2)	6.3 (5.7-6.9)
Cardiovascular Disease	7.2 (6.6-7.9)	9.4 (7.5-12.0)	7.0 (6.4-7.6)
Diabetes	5.7 (5.1-6.3)	8.4 (6.5-10.7)	5.4 (4.8-6.1)
Obesity	20.4 (19.3-21.6)*	28.8 (25.0-32.9)	19.6 (18.4-20.8)

Data source: BRFSS

Age-adjusted rates

*Data for obesity are often presented for 20+